

"The Original Online ST Magazine"

Vol III No.114

Post Office Box 6672
Jacksonville, Florida
32205 ~ 6672

Voice: 904-783-3319 10 AM - 4 PM EDT
BBS: 904-786-4176 12-24-96 HST
FAX: 904-783-3319 12 AM - 6 AM EDT

Our support BBS carries ALL issues of STReport
and
An International list of private BBS systems
carrying STReport for their users enjoyment

- The Editors' Podium
- DevPac Professional
- SIMM UPGRADE SHOWN
- Sig Hartmann at VideoTech
- CPU REPORT 9600 Baud
- QUARTET ST
- Word Perfect UP on Atari!
- ST REPORT CONFIDENTIAL

---==*** EYEWITNESS REPORT-> COMDEX * COMDEX * COMDEX ***==---

AVAILABLE ON: COMP-U-SERVE ~ DELPHI ~ GENIE ~ BIX

How deceiving the flight schedule was... board the airplane at 6:30am in Jax, Fl. and deplane in Las Vegas at 11:30am. Hmmmm, pretty quick flight. It actually totals out to more than 8 hours of flight time. After arriving Saturday at about 11:45am, the fun began... the time spent in getting settled in was next to unreal with numbers of people trying to do the very same thing. The unofficial figure for those attending Comdex was upwards of 125,000 people. I, like most other Atari supporters in attendance, went directly to the Atari display for a much needed "enthusiasm fix".

Atari, (hmmm.. my favorite subject), had a rather respectable display

area set up. The color scheme was subdued and very professional. The display area was located about 70 feet inside the main entrance in the west hall of the Las Vegas Convention Center. In the Atari display area, there were cubicles designed to enhance the appearance of the developers and those products that were on display. The setup also included two secluded offices set behind smoked glass and an upper level. Incidentally, there were 5 TT computers in use along with 5 Stacy 4mb units and scads of Portfolios. The new multi-rez Atari monitors were good looking and the performance was flawless. The Image Systems 19" color monitor in use at the SoftLogik cubicle was simply stunning. Atari distributed what could only be called a "first rate" Press Kit that was the "hit" of the Press Room.

COMDEX/Fall 89 and Atari put on quite a show. Folks... the best thing to come from our attendance for the past five days is the re-establishment of our faith in Atari and its POSITIVE future.

thanks for your support,

Ralph.... (still wide eyed)

:HOW TO GET YOUR OWN GENIE ACCOUNT:

To sign up for GENie service: Call: (with modem) 800-638-8369.

Upon connection type HHH (RETURN after that).

Wait for the U#= prompt.

Type XJM11877,GENie and hit RETURN.

The system will prompt you for your information.

THE GENIE ATARI ST ROUNDTABLE - AN OVERVIEW

The Roundtable is an area of GENie specifically set aside for owners and users of Atari ST computers, although all are welcome to participate.

There are three main sections to the Roundtable: the Bulletin Board, the Software Library and the Real Time Conference area.

The Bulletin Board contains messages from Roundtable members on a variety of Topics, organized under several Categories. These messages are all Open and available for all to read (GENie Mail should be used for private messages).

If you have a question, comment, hot rumor or an answer to someone else's question, the Bulletin Board is the place to share it.

The Software Library is where we keep the Public Domain software files that are available to all Roundtable members. You can 'download' any of these files to your own computer system by using a Terminal Program which

uses the 'XMODEM' file-transfer method. You can also share your favorite Public Domain programs and files with other Roundtable members by 'uploading' them to the Software Library. Uploading on GENie is FREE, so you are encouraged to participate and help your Roundtable grow.

The Real Time Conference is an area where two or more Roundtable members may get together and 'talk' in 'real-time'. You can participate in organized conferences with special guests, drop in on our weekly Open Conference, or simply join in on an impromptu chat session. Unlike posting messages or Mail for other members to read at some later time, everyone in the Conference area can see what you type immediately, and can respond to you right away, in an 'electronic conversation'.

> CPU REPORTâ €

=====

Issue # 41

by Michael Arthur

Remember When....

DEC introduced VMS, an operating system for their VAX minicomputers which was one the first systems to implement Virtual Memory, and how in 1978, the University of California at Berkeley, in an effort to bring Virtual Memory to Unix, created BSD Unix 3.0?

CPU INSIGHTSâ €

=====

V.32, the CCITT, and the Tale of the 9600 Baud Modem

Recently, a lot of attention has been placed towards the specific types of 9600 baud modems. It seems that as developments such as Magneto Optical Cartridge Drives, Megapixel displays and versatile microprocessors like the 80486 and 68040 appear so frequently in the industry, that in our endless pursuit of faster and more powerful computer technology (and to download that large file as fast as possible), we have come to expect the same rate of progress from our modems. But with the promise of faster modems have come controversy, as many modem manufacturers come out with incompatible products, each claiming to be the best. But in order to understand the current situation, we must take a look at the history of high-speed modems.

Modems were perhaps the first kind of computer network. Until the late 1980's, large corporations and the government were by far the biggest users of modems, looking more at reliability and power than the price or size of modems. In maintaining compatibility in data communications, (as compatibility is necessary in a global marketplace), the job of setting standards for modem transmission protocols fell to the CCITT, an

agency of the United Nations that specifies standards for all aspects of the communications industry.

When 9600 baud modems were first developed in the early 70's, the CCITT drew up a recommendation, called V.29, which was the first such standard for these modems. But as only large corporations could afford them at that time, V.29 only covered synchronous modems communicating over leased lines, as well as 9600 baud Facsimile, or Fax Machines. CCITT V.29 is still used today in all Fax Machines, but modems would eventually take a divergent path.

In 1984, when advances in chip technology made it feasible to sell 9600 baud modems for less than 5000 dollars, the CCITT again set up a new standard for 9600 baud modems, designated as V.32. This specification was a great improvement over V.29, as V.32 modems could be used on regular phone lines, and had some support for asynchronous transmission and full duplex operation. The one problem with this otherwise adequate protocol is that it was expensive to implement.

In order to accomplish full duplex operation, V.32 used a technique called echo cancellation. When both modems transmit data simultaneously, first each modem remembers what it has sent, then each modem uses echo cancellation to separate the data signal that it sent, and process the incoming data. At 9600 baud, though, it requires the use of high speed Digital Signal Processors (or DSP's), and DSP's have only recently become available commercially, as well as the other circuitry required for a V.32 modem being expensive to produce.

This was not a great factor in 1984, though, as high speed modems were primarily sold to the business market back then, in a comparatively small market. However, when the user demand for 9600 baud modems began to increase in 1986, many modem manufacturers found the cost of developing the circuitry for V.32 modems prohibitive, and looked to other ways of making moderately priced 9600 baud modems.

One method of sending data at 9600 baud is to compress the data that is being sent through the modem. In all modems, this data is sent in 10 bit segments (8 bits of data plus a start and stop bit). Modems using data compression algorithms first compact these data segments to a smaller size and transmit them. The receiving modem then decompresses the data as it gets it. This enables modems running at a slower baud rate (2400-4800) to emulate 9600 baud transmission.

In another way, called the ping pong method, both modems buffer the data to be transmitted, and flow control is implemented, so stop and go signals are sent to each modem at a quick rate, telling each when it has the line free to transmit data. This, by the way, is similar to how packet switched networks operate....

Ping pong is necessarily a half-duplex method (where only one modem sends info at a time) because although full duplex operation does not require echo cancellation at lower transmissions (since the signal sent by both modems can both fit on the phone line's bandwidth), a single 9600 baud signal can take up all of the line's bandwidth. Echo cancellation removes this problem by cramming both signals together, and leaving it up to both modems to sort the data out. Ping pong, however, cannot do this, but gets around full duplex operation by acting as a "traffic cop" to manage the time that modems have to transmit data.

Another problem with 9600 baud modems, whether they use ping pong,

echo cancellation, data compression, or any other method to achieve its transmission rate, is the increased probability of flawed data being sent, as a result of line noise or a poor connection. Because of this, the need for error correction in modems (where the modem would decrease its baud rate to reduce the chance of data errors, or simply retransmit the flawed data) became apparent. Into this situation, a company called Microcom arrived onto the scene....

MNP, CCITT V.42, and the future of Modeming

Microcom is a modem manufacturer selling primarily to the business market. They saw the need for error protection in all types of modems (not just the high speed variety) and invented the Microcom Networking Protocol, or MNP....

MNP was the first protocol to implement point to point error correction. This meant that if an MNP-equipped modem called another MNP equipped modem, then they would have the benefit of error free data, but if a non-MNP equipped modem was called, then another protocol (such as V.22) would let the modems communicate, but without MNP error correction. There are 9 classes of MNP, representing its various stages of development. MNP Classes 1 to 3 only had error protection, as Microcom worked to make the error protection 100% efficient. But at around Class 4 or 5, Microcom saw that data compression would also be needed in modems, resulting that MNP Classes 5 and above provided a very efficient method of error protection, and excellent data compression. Many modem manufacturers, seeing its capabilities, started licensing MNP, contributing to the general decline in popularity for V.32.

So, why isn't MNP the 9600 baud standard today, with Microcom becoming the Hayes of the modem industry? As in many other tragedies in the computer industry, this was caused by greed. Microcom, who also sold MNP modems to the business market, wished to have an edge over the licensees of MNP, who they began to see as their competition instead of their best allies. In order to do this, they started offering higher classes of MNP for their OWN modems than they licensed to other modem makers. As some of the other modem makers saw that they were being given less powerful Classes of MNP just so Microcom could become a standard, while Microcom itself took measures to put them out of business, some began looking for other protocols that implemented data compression and error protection. Even though MNP became a de facto standard, and Classes 5 and 6 of MNP were adequate for the job, the modem industry, not willing to overtly shun MNP, delegated it to the status of an aging standard....

This was a master stroke of luck for Hayes in 1987. In the late 70's and early 1980's, Hayes had made a de facto standard of the AT modem command set by both selling aggressively to businesses and by considering the needs of the home market in the area of 300-2400 baud modems. But in 1986, modem technology had progressed to the point where 300-1200 baud modems could be made cheaply. The resulting competition, and the boom in the modem market, resulted in that Hayes modems were being overlooked in favor of less expensive, equally efficient Hayes compatible modems. So when MNP began to be joined by alternative protocols which provided error protection, Hayes saw an opportunity to regain its once gargantuan lead in the industry.

The International Standards Organization (ISO), made up of the organizations in many countries that are responsible for standardization,

(such as ANSI), designed X.25, the primary protocol used to connect synchronous computers to packet networks, in 1976. The LAP B protocol, or Link Access Procedure-Balanced, as well as LAP D (an extended version of LAP B used for ISDN (Integrated Services Digital Network) communications) are implemented in this protocol.

Since LAP B is an error correction protocol that is an international standard (since it was designed by the CCITT), Hayes decided to use it in their V-Series SmartModem 9600 modems. The SmartModem also uses a modified version of V.32 which, instead of using echo cancellation at 9600 baud, uses the ping pong method at half duplex. Many of the other modem makers who rejected MNP, though, used their own proprietary methods, which resulted in VAST incompatibility problems.

In order to establish a standard that would end these problems, the CCITT developed a new standard, called V.42, in 1988. The CCITT has developed a new protocol for V.42, called LAP M (Link Access Procedure for Modems). LAP M is based on LAP B and LAP D, and provides the necessary error correction for V.42, while also providing 7 and 8-bit data compression which is 30 percent more efficient than MNP Class 5. V.42 is designed for full duplex modems, and achieves 9600 baud by the use of isynchronous (asynchronous to synchronous) converters, which convert asynchronous data to synchronous data which the modem can interpret.

V.42 itself has not been fully defined by the CCITT, as neither data encryption (something which is VERY important to businesses), or half-duplex operation are included, but will appear in LAP M as optional features. However, the vital components necessary to modem operation have been set, and modem manufacturers (such as Hayes and Microcom) will contribute to the process of establishing standards for these areas. Until a standard for data compression has been established, however, V.2 has "system hooks" in it, allowing modem manufacturers to use their own proprietary protocols. V.42 regulates this so it appears as an option, however, so potential incompatibility problems are avoided.

MNP Classes 1-4 will be supported in CCITT V.42, for an alternative error protection protocol included to maintain compatibility with the vast user base which has accepted 9600 baud MNP modems. However, MNP Classes 5 or 6, which also have data compression algorithms, will not be supported in CCITT V.42. But since the American National Standards Institute (or ANSI) would be the final determinant of the US implementation of V.42, these Classes of MNP may be supported in the United States.

V.42 promises to be an excellent 9600 baud standard, which sets both rules for the internal makeup and data transmission between modems (except for the modem command set, which will be developed by the CCITT) and which establishes an adequate bridge/link for the present crop of incompatible 9600 baud modems. MNP modems, such as US Robotics and Telebit, will not become obsolete, due to V.42 designating MNP, and Hayes 9600 baud V-Series SmartModems will have minimal incompatibility problems if any, since LAP M is a superset of LAP B. Hayes is now in the process of producing V.42 modems, and US Robotics has recently announced plans to introduce a V.42-compatible version of their Courier HST Modem in Early 1990, and to offer low-cost upgrades for earlier versions of their modems. With the two major 9600 baud Modem manufacturers in the US pushing for it, the CCITT V.42 standard may become popular here FAR more quickly than otherwise imaginable....

Also, as V.42 provides a powerful gateway to standardized 9600 baud telecommunications, Telebit and US Robotics are working together to make a

high speed standard for transmitting data at above 9600 baud on ordinary phone lines. And as the CCITT has endorsed their efforts to develop this protocol for use in future V.x2 specifications for modem standards....

But ponder, if you will, this question:

- 1) When will the issue of 9600 baud modems be vital to the majority of modem users?
- 2) Will Commodore's \$20 Million dollar Ad Campaign truly have a powerful enough effect on the Amiga's sales this Christmas season to offset the cost of this program, let alone help Commodore through its current financial straits by the Second Quarter of 1990?

CPU REPORT CONFIDENTIALâ €
=====

Armonk, NY -----	IBM has licensed the design technology for its 4 Megabit DRAM chips to Micron, one of the few US Companies still producing memory chips, and agreed to engage in cross-licensing for semiconductor and memory patents. Given that IBM, currently the only major US company to have introduced 4 Meg DRAM chips, has said they may license this technology to other US Semiconductor Vendors....
---------------------	---

Paris, France -----	The Business Software Association has recently filed charges against two major French companies for not paying the entire amount of their site-licensing fees on Lotus, Ashton-Tate, and Microsoft software products. The BSA also plans to step up their legal activities in this area. But curiously, it seems that in Europe, a software product sometimes costs more than twice as much as the American version, which is usually identical in capabilities....
------------------------	---

Las Vegas, NV -----	Commodore did not introduce the Amiga 3000 at Fall Comdex, saying that it is still under development, and now will not be introduced until Commodore has finished porting Release 4.0 of AT&T Unix to the Amiga, in the First Quarter of 1990. This is also when Version 1.4 of the Amiga's OS is scheduled to be completed....
------------------------	---

However, Commodore did announce Amiga price cuts of up to 10 - 15 percent. They also introduced the A2500/30, a new version of the Amiga 2000 with a 25 MHZ 68030 and a 68882 math chip, 1 Meg of RAM standard, and a 40 Meg internal Hard Drive. Cost: \$4700.00....

Las Vegas, NV -----	Lotus Development and WordPerfect have announced an agreement to co-design the user interfaces of 1-2-3/G and WordPerfect for Presentation Manager, so that they have the same "look and feel", and are able to seamlessly exchange data, using OS/2's Interprocess
------------------------	---

Communications facilities. Both products will be out by Summer 1990.

Interestingly enough, as these products will have to compete against Microsoft's PM versions of Excel and Word, which will have a similar method of connectivity between them....

> STR Spotlightâ €
=====

COMDEX/Fall89....WOW!!

by R.F.Mariano

The list of exhibiting developers was like a who's who register in the Atari community. Atari's executive representation was excellent. Lead by Jack Tramiel (the founder) and his sons, Sam and Leonard, along with Antonio Salerno, Mel Stephens, Chas. Cherry, and almost everyone we know, either from online or through our dealings with the company. We did however, have the distinct pleasure of meeting most all the folks for the first time and believe me, they were indeed warm and friendly at all times.

The Portfolio was clearly the HIT of the Atari display. Sure the TT was there.. but in sheer numbers Portfolio ran away with the amount of folks coming into the Atari booth specifically to "see" the Portfolio. The stats are that Atari has sold approximately 123,000 Portfolio units to date and there is no end in sight. Please, keep in mind my friends, the Portfolio may be the best thing to ever happen to Atari... why you ask? Easy, the game image is slowly going down the tubes.....HOW DO YOU SPELL RELIEF?? PORTFOLIO.

ATARI CORP. had DESKSET II on display and in the very capable hands of Elizabeth Shook. Admittedly, after Miss Shook gave a demonstration of DeskSet II, it certainly appears to have a number of first rate, redeeming, values. The third party developers who were setup in the Atari area put on quite a show for all attendees. DeskSet II is designed as a typography modification system as opposed to a DTP program contrary to preliminary reports it deserves a second look.

The "NEW" goodies to be seen were simply dazzling to the senses, for example, the 19" Multi-Rez monitor in use in the Pagestream (Soft Logik) cubicle.

The STe	TT
Mega File 44	Stacy
Portfolio	Moniterm 19" monitors.
SIMM Expansions	Tl6 16mhz upgrades
Mage Systems	

Developers in attendance at the Atari site

STart & Antic - Jim Chapperal

Gadgets by Small - Dave & Sandy Small - Doug Wheeler

Fast Technologies - Jim Allen

JRI (John Russell Innovations) - John Russell

Soft Logic - Mike and Deron K and Mark

ISD - Nathan Potechin and Julius O.

Migraph - Liz Mitchell

Abacus - Staff

Michtron - George Miller

Blue Chip Software - Lauren Sellers

Soft-Aware - Richard Skraly

Dr. T's - Staff

Video Touch - Staff

Word Perfect - Reed Hainsworth

Getting the most attention was, without a doubt, the Portfolio. Many individuals from the MS-Dos world who had never considered an Atari as a serious computer source were deliberately seeking out the Atari display to examine the Portfolio. Naturally, they HAD to see all the other 'neat' goodies running in the Atari area. Most were, by their own admissions, "quite impressed" with the performance of the Atari computer line.

The TT model uses the 68030 cpu and supports 5 resolutions on one multi-sync monitor and has built-in support for the Moniterm and other big big screen monitors. The TTs were in use in several cubicles and represented itself quite well. ISD was running DYNACADD on a TT along with a plotter, very impressive. There were however, a number of Mega STs running the Tl6 16mhz enhancement too and they looked comparable to the TT in many ways. I saw "clones" of my system in use and was pleased to see that others felt the same as I. I chose to build up my Mega4 with a moniterm and Tl6 enhancement.

The STe has two additional ports on the left forward side and are for the new joysticks, on the back are 2 RCA jacks for stereophonic output. The STe was set up displaying games and since it was using the extended color palette, stereo sound and the light gun it now looks like a serious

contender in the entertainment arena.

My favorite, The Stacy (ST laptop) also had a prominent position of display here, one was in the very capable hands of GBS, (Gadgets by Small) demonstrating the Apple MAC emulator GCR. Another was at the Blue Chip Software cubicle with Lauren Sellers doing the honors while demonstrating Word Flair. The other units were in the Midi areas and justifiably so as they seem to fit right in. Since Stacy has passed the FCC type acceptance tests, it won't be long now... perhaps by mid December.

Moniterm monitors were quite obvious by the number of units in use. The performance of these beauties in nothing short of spectacular. We found that the major stumble is a simple fix to the video call one must use VDI instead of getrez then the big screen is free to 'do its thing'. The moniterm was in use in mast all the developers cubicles.

The Atari reception was well put together and the revelation of highly increased Developer support through a totally revamped program was indeed a welcome announcement. Atari's goals, as far as we are concerned, are well within reason for 1990. Mr. Gordon Monnier introduced this reporter to Leonard Tramiel early on in the evening, and from that time forward the delights of the evening went strictly uphill. In fact, I found Leonard to be quite charming and very willing to discuss the future of Atari. As the evening wore on, Leonard invited me to accompany him as he 'made the rounds' of the reception. At last... I got to meet John Townsend and Ken Badertscher, I must say, both young men were very impressive. Atari has an excellent staff assembled and should become quite a competitor in the coming months. A very pleasant surprise came later in the evening when I found John Eidsvoog playing one of my favorite styles of music, progressive jazz, folks... John is not good.. he is a great musician.

> MichTron STR FOCUSâ € FORGING AHEAD and DELIVERING THE RESULTS!
=====

FINDING WAYS TO SATISFY
=====

MichTron had their own display area, #1899, it soon became the mecca for Atari enthusiasts who were wandering about the main convention hall. As one began looking over the MichTron display, it became very apparent that this company makes it their business to offer to the users programs and hardware they know will be welcomed with open arms. From PC Speed to Quartet... the MichTron display was a treat for any user, Atari, PC, Amiga and of course, the avid game player.

QUARTET is a 4 voice polyphonic music synthesizer that transforms your ST into a high quality musical creativity tool and instrument. It permits one to compose and arrange original work in its four scrolling staves by using a variety musically instrumented frequencies already built into the

program. After your great works of musical art are done, you may then listen to your masterpiece through your TV, monitor or replay cartridge.

Additionally, QUARTET supports new programming techniques that allow audio playback at up to 16khz, thus providing the ST with unrivaled sound quality.

- 4 voice sampled synthesis
- Powerful music score editor (mouse controlled)
- Easy to use slides and loops
- Variable playback from 4 to 16khz
- Up to 20 instruments in use, in memory, at one time
- Wide range of playback environments
- Ability to use sampler outputs
- Sampler processor for filtering and repetition
- Capability to add your own songs to your own programs
- Provision for full MIDI compatibility, both play and record

MichTron has a real winner in Quartet, be sure to check it out at your dealer

PCSPPEED is everything they say it is, with over ten thousand of these devices sold worldwide, you can be sure there will be ample increments of new software and improvements for the future. We watched Microsoft windows running at more than a respectable speed on an ST.

Through the years MichTron has shown, time after time, their undying support for the Atari ST arena, even when things looked rather thin. The MichTron presence at COMDEX/Fall 89 was first rate, no matter how judged and by what yardstick, we saw many things that are coming down the road very shortly from this growth oriented company.

DEVPAC PROFESSIONAL is a greatly enhanced version of DevpacST/Amiga, the acclaimed assembly-language development system for the Atari ST and Commodore Amiga machines. The additional features are designed specifically for professional programmers who require features over and above the regular user. Devpac Developer is compatible with DevpacST/Amiga & Assembles to seven different output file formats for the Atari and Amiga as well as S-Records. Dual machine development is supported for direct remote assembly and cross debugging. Both assembler and debugger are integrated with the editor and are available as stand alone versions. The Multi-Format linker can mix any combination of input file types to produce any output file type. Devpac Developer runs faster than Devpac 2 despite having over three times as many directives and op-codes. Its still the fastest professional assembler available.

FEATURES

Devpac Developer includes all the features of Devpac. In addition, it offers these advanced features:

Flexibility

Devpac Developer directly generates the following output file formats: ST Executable - GST Linkable - DRI Linkable - Amiga Linkable - Amiga Executable - HiSoft absolute and S records. HiSoft absolute is a special format designed for multiple section absolute code type programs, especially games. The multi-format linker takes any combination of linkable formats and can produce any executable output format. This is particularly suited to cross development for other 68000 based machines,

or for another machine of the same type. The assembler features a Full Specification two pass Motorola - standard based assembler, including macros, conditionals, and include files. All source files are ASCII and the parser is flexible enough to accept most other assemblers source code, for example, colons are not obligatory after labels and comments do not need delimiting with semicolons. Devpac Developer includes support for 68010/020/030 processors, 68881/2 (requires a math co-processor to be fitted on the host machine) and 68851.

Speed

Dvpac remains the fastest professional-specification assembler available; partly due to the advanced caching algorithms used; include files are only read on pass 1 if memory permits for example.

Environments

- Atari ST Host:

The normal environment is from with the GEM based screen editor where both the assembler and debugger can be instantly accessed. In addition, any other GEM or TOS program can be invoked and commands passed to any shell being used by the programmer. Many programmers have special editor and environment preferences therefore, all programs are available in stand alone versions using environment variables and return codes. (Note: we cannot guarantee compatibility with present versions of the Laser C shell environment)

- Commodore Amiga Host:

The normal environment uses the Intuition based screen editor, where both the assembler and debugger are instantly accessed. Many programmers have strong editor and environment preferences so all programs are available in stand alone versions and return codes.

- Master & Slave Hardware

For each host machine Devpac comes complete with master hardware. This consists of an interface box allowing fast parallel communication between machines and is required for Devpac Developer to run. Additional slave hardware is available to facilitate dual machine development, described below. A master can be used as a slave, but not visa versa. Examples of different combinations are described later.

- Dual Machine Development

Dvpac Developer as supplied can be used for dual - machine development by passing disks between machines (e.g. by using DOS TO DOS between STs and Amigas) or via the serial port (using the programmer's own or third party software). However, as a option additional hardware is available for destination machines providing a fast data link allowing remote assembly and full remote symbolic debugging. Unlike the ordinary version of the debugger, the remote version makes no demands on interrupts or screen display allowing the advanced features of ordinary MonST/Am to be available for the first time to games programmers and other hardware-level programmers. Remote hardware is available for both Atari ST and Commodore Amiga machines.

- Technical Support

Dvpac Developer registered owners will be automatically sent free software upgrades for a year and be entitled to additional technical support.

- Manual

Devpac Developer comes with a detailed manual explaining all the various tools along with notes regarding the file formats and details about customizing the remote stub code.

- Freelance Games Programmer

They prefer the ST as a programming environment but wishes to develop for both the ST and the Amiga. Use a Mega4 for development with a 520ST and an A500 as test machines. They need a Devpac developer host for the Mega (which will be supplied with the master cartridge), a ST slave cartridge for the 520 and an Amiga Slave for the A500. They then can develop entirely on the Mega, then upload the code to either slave machine and debug the programs remotely. When the programs are finished they can convert the absolute files they've been using to a format suitable for custom disk loaders.

- Embedded Systems Programmer

Using a Mega ST and wishing to develop code for a stand-alone 68020 board. They need a Devpac Developer ST Host which will allow the creation of S Records for uploading either to the board itself or to an Eprom programmer. In addition, they can exploit the 68020 instructions and addressing modes and for debugging could convert the symbol table file into a form suitable for an in-circuit emulator. They will have to write a simple upload program and will not be able to use the dual machine features.

- Applications Programmer

Having an Amiga 2000 and developing high level Amiga applications. A Devpac Developer Amiga host will be needed. This will allow creation of the applications in a modular way, exploiting a 68881 math co-processor in a special version of the application. Ordinary debugging can be achieved using the standard release of MonAm, but for harder to find bugs they may find it worthwhile to run the program on an A500 together with a slave cartridge. It could then remotely debug the application with much greater control as the remote debugger can perform remote sub-task intercepts and step through any system call, unlike the native Amiga debugger. If its decided to port the application to the Atari ST, an Atari slave cartridge would allow all development to remain on the Amiga but the advantages of remote debugging would be available for the ST version.

- Software Development Team

The team has a wide variety of hardware, including high end STs and Amiga as well as low end test machines of both types. Their workload varies, as does the programmer preferences, so they would be suited for a Devpac Developer site license. Due to the variable nature of their work, most cartridges would be master so that they can be used as slaves for remote debugging as required. They can also use the cartridges to transfer files between the machines using software included with Devpac Developer.

For more information; call:

Paul Deckard, Director of Public Relations
MichTron Inc.
576 S. Telegraph
Pontiac, MI 48053
1-313-334-8729

> Atari Stock ~ STReportâ ¢
=====

THE TICKERTAPE
=====

by Glenn Gorman

Atari stock dropped 1/4 of a point on Monday and 3/8 on Tuesday. It rose Wednesday by 1/8, Thursday by 1/4. No change on Friday. Finishing up the week at 10 points. Up 1/4 of a point from our last report.

+-----+						
ATARI STOCK WATCH						
Week 11-06 to 11-10						
=====+	=====+	=====+	=====+	=====+	=====+	
	Monday	Tuesday	Wednesday	Thursday	Friday	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
Sales	1339	1382	1523	1405	1221	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
Last	10 ---	9 5/8	9 3/4	10 ---	10 ---	
+-----+	+-----+	+-----+	+-----+	+-----+	+-----+	+-----+
Chg.	- 1/4	- 3/8	+ 1/8	+ 1/4	-----	
=====+	=====+	=====+	=====+	=====+	=====+	=====+
From >	THE CAVE ST BBS <>	609-882-9195 <>	300/14400 HST <>	F-NET #351		
=====+	=====+	=====+	=====+	=====+	=====+	=====+

> ST REPORT CONFIDENTIALâ ¢ Sayin' it like it is....
=====

- Las Vegas, NV ***** WORD PERFECT TO CONSIDER GRAPHICS FOR ST *****

Among the subjects discussed was the compatibility problem with the Moniterm monitor and what the future may hold as far as WP and the Atari

marketplace. Surprisingly, the WP folks are "UP" on Atari and feel the new directions taken by Atari will lead to more substantial upgrades for the program in the ST arena.

- Las Vegas, NV

***** INFORMER II TO GET MONITERM FIX *****

Richard Skraly, programmer and developer of Informer II informed this reporter that they too are making the necessary adjustments to Informer II so that the program will behave on the Moniterm. "This monitor is simply too gorgeous, we will make sure our software works with it". He said.

- Las Vegas, NV

***** Les Player Heads up PR work for GFA *****

Les Player, formally of Atari UK and Stacy project manager, is heading up a firm of his own in the UK which will, among other enterprises, handle GFA products. Player felt, like most all at Comdex, that the Atari arena is far from dead and that the new attitude and direction exhibited by Atari was very encouraging.

- Las Vegas, NV

***** ANDY MARKEN TOTALLY UPBEAT ON ATARI *****

Andy Marken, of Marken Communications, has the right idea; his opinion was perhaps the most upbeat of all at the Atari display area. He eloquently stated that as of this show, "We are on our way".. This reporter has to agree, after speaking to the Tramiels and most all the folks in the Atari area, they indeed are on their way in a most positive manner. Atari, by all indications, is headed for it's best year yet.

- Las Vegas, NV

**** JRI UNVEILS SIMM MEMORY UPGRADE! ****

John Russell Innovations, JRI, unveiled a nifty little device at COMDEX, it is a memory upgrade using SIMMS. The board, no bigger than a deck of cards, is quite the goodie. According to the spokesman, John Russell, this device will be available shortly.

=====

NEW PRICES! & MORE MODELS!!
=====

ABCO COMPUTER ELECTRONICS INC.
P.O. Box 6672 Jacksonville, Florida 32236-6672
Est. 1985

Voice: 904-783-3319 10 AM - 4 PM EDT
BBS: 904-786-4176 12-24-96 HST
FAX: 904-783-3319 12 PM - 6 AM EDT

HARD DISK SYSTEMS TO FIT EVERY BUDGET

All systems are complete and ready to use, included at NO EXTRA COST
are clock/calendar and cooling blower(s).

ALL ABCO HARD DISK SYSTEMS ARE FULLY EXPANDABLE
(you are NOT limited to two drives ONLY!)
(all cables and connectors installed)

RUGGED SEAGATE HARD DISK MECHANISMS

* ICD HOST ADAPTERS USED EXCLUSIVELY * OMTI HIGH SPEED CONTROLLERS *

32mb #SG32238	549.00	42mb #SG44710	619.00
51mb #SGN4951	629.00	65mb #SG60101	689.00
80mb #SGN296	729.00	100mb #SG84011D	949.00
130mb #SG1244D	1099.00	145mb #SG3A421	1110.00
170mb #SGT41776	1389.00	260mb #SG1244Q	2169.00
	320mb #SGN7788Q	3295.00	

Listed above are a sampling of the systems available.
Prices also reflect various cabinet/power supply configurations
(over sixty configurations are available, flexibility is unlimited)

--> CALL for Special Holiday Discounts <--

*** ALL Units: Average Access Time: 24ms - 34ms ***

ALL UNITS COMPATIBLE WITH --> MAGIC SAC - PC-DITTO/II - SPECTRE/GCR

LARGER units are available - (special order only)

* Removable Media Devices NOW Available (44mb) Syquest 555 *
* SPECIAL INTRODUCTORY PRICES *

EXTRA CARTRIDGES: 97.95 (anytime)

* SYQUEST 44MB (#555) REMOVABLE MEDIA DRIVE *

- SYQUEST 44 MB removable media drive - ICD ST Host Adapter

- ICD Mass Storage Utility Software
- Fan & Clock
- 3' DMA Cable
- Multi-Unit Power Supply
- (1) 44 MB Syquest Cart.

Completely Assembled and READY TO RUN!
ONLY \$869.00

We would offer floppy drives.. but Computer Shopper has 'em at the right price. And.. you can plug 'em right into our cabinets and power supplies. Low-Boy OR Standard Case (designed with room for another 3.5 OR 5.25" drive) They're made for user expansion! TRUE UPGRADE-ABILITY!

* TWIN SYQUEST 44MB REMOVABLE MEDIA DRIVES ... PROGRAMMER'S DELIGHT *
SPECIALLY PRICED \$1529.00

* SYQUEST 44MB REMOVABLE MEDIA DRIVE AND HARD DRIVE COMBINATIONS *
- Syquest 44 Model [555] and the following hard drives -
50mb SQG51 \$1299.00 30mb SQG38 \$1219.00
65mb SQG09 \$1339.00 85mb SQG96 \$1399.00

LOWBOY - STANDARD - DUAL BLOWER CABINETS

- Custom Walnut WOODEN Cabinets - TOWER - AT - XT Cabinets -
ALL POWER SUPPLIES UL APPROVED

-* 12 month FULL Guarantee *-
(A FULL YEAR of COVERAGE)

Quantity & Usergroup Discounts Available!

DEALERS and DISTRIBUTORS WANTED!

Personal and Company Checks are accepted.

ORDER YOURS TODAY!

904-783-3319 9am - 8pm EDT

> A "Quotable Quote"â ¢
=====

"This is the beginning of a new era...
of co-operation and positive endeavors"

...FDR

"ATARI IS BACK!"

ST-REPORTâ € Issue #114 "Your Independent News Source" November 17, 1989
ALL RIGHTS RESERVED ' ' copyright 1989

Views, Opinions and Articles Presented herein are not necessarily those of
the editors, staff, ST Reportâ € or CPU Reportâ €. Reprint permission is

hereby granted, unless otherwise noted. All reprints must include ST
Report or CPU Report and the author's name. All information presented
herein is believed correct, STReport or CPU Report, it's editors and staff
are not responsible for any use or misuse of information contained herein.
